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AUTHORITY	
USNSWC ltr, 24 Oct 1975; USNSWC ltr, 24 Oct 1975	

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U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIA

REPORT NO 1014

AIRCRAFT ROCKET FUZE SYSTEMS

20th Partial Report

T-2023 P. 1. ROCKET FUZE;
EVALUATION TESTS OF

Task Assignment: MPG-Re2b-11-1-52

FINAL Report

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NPG REPORT NO. 1014

T-2023 P. I. Rocket Fuze; Evaluation Tests of

PART A

SYNOPSIS

1. The T-2023 fuze has been designed for use with the 2 1/2" 75 HEAT rocket head. Previous functioning tests of the fuze were conducted by the Naval Proving Ground for Picatinny Arsenal in 1950-51. Due to modifications of the rotor additional tests on the fuze were requested at this time.

2. The object of this test was ^{conducted} to determine whether the T-2023 fuze will function satisfactorily with:

(1)
a. Mod 502A Rotor in lieu of the M501A Rotor.

(2)
b. Mod 502A Rotor with straight RDX lead (PX-8-796) in lieu of the M501A Rotor which has an M29 Detonator plus an RDX lead.

3. It is concluded that ~~in the present tests~~ the T-2023 fuze subjected to high velocity impacts, functioned satisfactorily:

(1)
a. Nine out of ten times when the Mod 502A Rotor was used in lieu of the M501A Rotor.

(2)
b. Ten out of ten times when the Mod 502A Rotor with a straight RDX lead (PX-8-796) was used in place of the same rotor having an M29 Detonator plus an RDX lead.

(3)
c. Ten out of ten times with a Mod 501A Rotor.

(4)
d. With a fuze functioning time of approximately 56 to 69 micro seconds, as measured on a high speed oscilloscope.

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T-2023 P. I. Rocket Fuze; Evaluation Tests of

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T-2023 P. I. Rocket Fuze; Evaluation Tests of
-----PART BINTRODUCTION

1. AUTHORITY:

This test was authorized by reference (a) and conducted in accordance with reference (b).

2. REFERENCES:

- a. NOL spdltr NP/NOL/X1-1(2444) Ser 2741 DF:GDB
of 2 May 1952
- b. OCO ltr ORDTA, O.O.471.82/1051(c)ORDBB-TE2471.94/64-137
of 22 April 1952
- c. NPG Report No. 779 of 12 May 1951

3. BACKGROUND:

The T-2023 fuze has been designed for use with the 2"75 HEAT rocket head. Previous functioning tests of the fuze were conducted by the Naval Proving Ground for Picatinny Arsenal in 1950-51. Due to modifications of the rotor additional tests on the fuze were requested at this time.

4. OBJECT OF TEST:

The object of this test was to determine whether the T-2023 fuze will function satisfactorily with:

- a. Mod 502A Rotor in lieu of the M501A Rotor.
- b. Mod 502A Rotor with straight RDX lead (PX-8-796) in lieu of the M501A Rotor which has an M29 Detonator plus an RDX lead.

5. PERIOD OF TEST:

- | | |
|-------------------------------------|----------------|
| a. Date Project Letter | 2 May 1952 |
| b. Date Necessary Material Received | 5 & 6 May 1952 |
| c. Date Commenced Test | 7 May 1952 |
| d. Test Completed | 14 May 1952 |

T-2023 P. I. Rocket Fuze; Evaluation Tests of

6. REPRESENTATIVE PRESENT:

Mr. R. O. Nitzsche

Picatinny Arsenal

PART CDETAILS OF TEST

7. DESCRIPTION OF ITEMS UNDER TEST:

- a. Lot PAE-9120: T-2023 P. I. Rocket Fuze as shown in Figure 1. Initiated upon impact by means of a percussion primer and detonator in the nose. The fuze was equipped with a Mod 501A Rotor.
- b. Lot PAE-9121: Same as Lot PAE-9120 except rotor changed from Mod 501A to Mod 502A.
- c. Lot PAE-9122: Same as Lot PAE-9121 except for explosive components. Straight RDX lead used in place of M29 detonator plus RDX lead.

8. DESCRIPTION OF TEST EQUIPMENT:

Rocket Heads - 2 7/8" Rocket Head T-2016; 0.92 lbs. Composition "B" with tetryl booster pellet; total head weight 5.65 lbs.

Adapters - 2 7/8" head to 5"0 HVAR motor; Picatinny Dwg. PX-8-539.

Motors - 5"0 rocket motors Mk 2 Mod 3.

Target - 7-1/2" Class B (homogeneous) armor plate at 0° obliquity.

Launcher - NPG 1050 ft.

Velocity Measurements - Potter Counter Chronograph.

Cameras - 16mm hi-speed Fastax; Ballistic Synchro.

Fuze Functioning Time Measurements - Photoelectric detector, Tektronix type 513D cathode ray oscilloscope, Fairchild-Polaroid oscillograph camera, copper contact screens.

T-2023 P. I. Rocket Fuze; Evaluation Tests of

9. PROCEDURE:

a. The 2 7/8" shaped charge rocket heads T-2016 containing the T-2023 nose fuzes at ambient temperature (approximately 70°F) were assembled to 5" HVAR motors by means of a steel adapter. A second 5" HVAR motor was used as a pusher for the first 200 ft. of travel on the 1050 ft. launcher. All rounds were fired at zero obliquity against a 7-1/2" homogeneous armor plate positioned 285 ft. from the muzzle of the launcher. Velocities were measured 75 ft. before the target. Hi-speed 16mm Fastax cameras, operated at 4000 frames/second covered the target to insure that satisfactory impacts had been made on all shots.

b. No difficulty was encountered in determining the penetration of the rounds inasmuch as all but 4 completely penetrated the target. Those that had only a partial penetration produced a bulge on the back of the plate, indicating that penetration was within an inch of being complete.

c. Fuze functioning times were measured during the last two days firing by means of a high speed oscilloscope. Time was measured from the contact of the fuze and plate to the detonation of the head. The contact of the fuze and plate was sensed by means of a contact screen which was placed 3/4" before the plate. When the nose of the fuze penetrated the screen and made contact with the plate, an electric circuit was completed. This circuit closure triggered the sweep of a Tektronix Type 513D Cathode Ray oscillograph. A photoelectric detector was set up near the plate to detect the flash of the detonation. The burst signal from this photoelectric detector was fed to the vertical deflection input of the oscillograph. Thus the time from the beginning of the trace to the burst signal represented the time required for the fuze to function. The pattern on the oscillograph was recorded on a Fairchild-Polaroid oscillograph camera. For impacts 39926, 39928, and 39935, the oscillograph was set for a sweep speed of 40 micro-seconds per centimeter, with a total length of about 10 centimeters or 400 micro-seconds being available. For impacts 39927, 39929, and 39934, the sweep was set for 20 micro-seconds per centimeter, or 200 micro-seconds total. The exact calibrations of the oscillograph sweeps were determined in the laboratory by means of a 100-KC standard frequency generator. From these calibrations the function times were computed.

T-2023 P. I. Rocket Fuze; Evaluation Tests of

10. RESULTS AND DISCUSSION:

a. Detailed results of the test are provided in Table I and Impact Records 1-30. Figure 1 is a drawing of the T-2023 fuze and Figure 2 a view of the impacts resulting from the first days firing. Excerpts from the hi-speed camera records of impacts producing complete and incomplete penetrations with Lot PAE-9122 fuzes are shown as Figures 3 and 4. Figure 5 is a ballistic synchro camera picture of a round in flight, shortly before target impact.

b. Following is a summary of the test results obtained:

Target: 7-1/2" Cl. B plate (homogeneous armor) at 0° obliquity.

<u>Fuze Lot</u>	<u>No. Rds. Fired</u>	<u>Penetration Results</u>	<u>Fuze Functioning Times Micro-Seconds</u>
PAE-9120	10	8 Comp; two 7"	Not taken
PAE-9121	10	9 Comp; one dud	56 to 69
PAE-9122	10	9 Comp; one 7-1/4"	Not taken

c. No appreciable difference in penetration effectiveness could be noted between the original style of fuze and its two modifications. The cause of the dud on lot PAE-9121 could not be explained since the explosive in the head deflagrated upon impact, leaving no clues. The higher percentage of complete penetrations obtained with Lot PAE-9122 as compared with Lot PAE-9120 (the original T-2023 fuze) is insufficient to judge it as being superior, due to the small number of rounds fired. However, the simplified method of explosive loading Lot PAE-9122 should indicate a definite advantage for it after proving that it functions at least equally as well as the other two types.

d. As reported in reference (c), previous attempts to measure fuze functioning times with a photoelectric-cell camera and oscilloscope had failed due to slowness of the latter, resulting in its inability to separate the fuze impact from the fuze detonation. The acquisition of new equipment in the interim made it possible to trigger the oscilloscope when the nose of the fuze made contact with the target and obtain a recognizable vertical component of the beam when the fuze detonated. Photographing the scope with a Land type camera made it possible to

T-2023 P. I. Rocket Fuze; Evaluation Tests of

obtain a record of the functioning time within a few minutes after the round was fired. A single motor was used for propulsion of the rounds on which fuze times were measured, to insure burnout of the motor before it came into the view of the photoelectric detector. The luminescence of a burning motor probably would have triggered the photoelectric cell prematurely. The single motor produced a lower striking velocity but it should not have altered the fuze functioning time.

PART DCONCLUSIONS

11. It is concluded that in the present tests the T-2023 fuze subjected to high velocity impacts, functioned satisfactorily:

a. Nine out of ten times when the Mod 502A Rotor was used in lieu of the M501A Rotor.

b. Ten out of ten times when the Mod 502A Rotor with a straight RDX load (PX-8-796) was used in place of the same rotor having an M29 Detonator plus an RDX lead.

c. Ten out of ten times with a Mod 501A Rotor.

d. With a fuze functioning time of approximately 56 to 69 micro-seconds, as measured on a high speed oscilloscope.

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NPG REPORT NO. 1014


T-2023 P. I. Rocket Fuze; Evaluation Tests of

The tests upon which this report is based were conducted by:
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NPG REPORT NO. 1014

U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIA

Twentieth Partial Report

on

Aircraft Rocket Fuze Systems

Final Report

on

T-2023 P. I. Rocket Fuze; Evaluation Tests of

Project No.: NPG-Rc2b-11-1-52
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T-2023 P. I. Rocket Fuze; Evaluation Tests of

TABLE I

FIRING RECORD OF T-2023 FUZE AND MODIFICATIONS

IN 2775 SHAPED CHARGE HEAD T-2016

NOTE: All rounds fired from NPG 1050 ft. launcher with 5" HVAR motors vs 7-1/2" homogeneous armor plate at 0° obliquity.

<u>Date</u>	<u>Impact No.</u>	<u>Head No.</u>	<u>Striking Velocity (f/s)</u>	<u>Penetration</u>	<u>Exit Dimensions Inches</u>	<u>Fuze Funct. Time Micro-Secs.</u>
<u>Lot PAE-9120</u>						
5-7-52	39903	299	2025	Comp.	3/8 x 3/8	-
5-7-52	39904	329	2039	7"	None	-
5-7-52	39905	420	2053	Comp.	3/8 x 3/8	-
5-13-52	39928	238	1545	Comp.	1/4 x 1/4	65
5-13-52	39929	352	1542	Comp.	1/4 x 1/4	69
5-14-52	39931	164	1813	Comp.	3/8 x 3/8	-
5-14-52	39932	201	1832	7-1/4"	None	-
5-14-52	39933	96	1808	Comp.	3/8 x 3/8	-
5-14-52	39934	301	1532	Comp.	3/8 x 3/8	Missed
5-14-52	39935	422	1550	Comp.	3/8 x 3/8	57
<u>Lot PAE-9121</u>						
5-7-52	39906	101	2132	Comp.	3/8 x 3/8	-
5-7-52	39907	381	2043	Comp.	3/8 x 3/8	-
5-7-52	39908	402	2043	Comp.	3/8 x 3/8	-
5-12-52	39921	167	1840	Comp.	3/8 x 3/8	-
5-12-52	39922	255	1857	Comp.	3/8 x 3/8	-
5-12-52	39923	362	1957	Comp.	3/8 x 3/8	-
5-12-52	39924	405	1929	Comp.	3/8 x 3/8	-
5-12-52	39925	-	1860	Comp.	3/8 x 3/8	-
5-13-52	39926	146	1551	Comp.	1/4 x 1/4	56
5-13-52	39927	340	1511	None-Dud Fuze		

T-2023 P. I. Rocket Fuze; Evaluation Tests of

TABLE I (Cont'd)

<u>Date</u>	<u>Impact No.</u>	<u>Head No.</u>	<u>Striking Velocity (f/s)</u>	<u>Penetration</u>	<u>Exit Dimensions Inches</u>	<u>Fuze Funct. Time Micro-Secs.</u>
<u>Lot PAE-9122</u>						
5-8-52	39909	211	1958	Comp.	3/8 x 3/8	-
5-8-52	39910	341	2017	Comp.	3/8 x 3/8	-
5-8-52	39911	322	2034	Comp.	3/8 x 3/8	-
5-8-52	39912	342	1964	Comp.	3/8 x 3/8	-
5-8-52	39913	236R	1976	7-1/4"	None	-
5-9-52	39914	152R	1901	Comp.	3/8 x 3/8	-
5-9-52	39915	210	1864	Comp.	3/8 x 3/8	-
5-9-52	39916	283R	-	Comp.	3/8 x 3/8	-
5-9-52	39917	390	-	Comp.	3/8 x 3/8	-
5-9-52	39918	-	1908	Comp.	3/8 x 3/8	-

IMPACT RECORD

U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIA

IMPACT NO. 39903

IMPACT DATE 5-7-52

NPG TEST NO. T-2222-1.24

OBJECT Functioning Test of T-2023 Fuzes for 2"75 Shaped Charge
Rocket Head T-2016 with Two 5"0 HVAR Motors vs 7-1/2" C.I.B. Plate
Reference: NPG ltr. 110.1014 dated 2 May 1952
Reference: Bureau ltr. NP/NOL/XI-1(2444)SER2741DF:GDH dated 2 May 1952
Task Assignment No. 110.1014 dated 2 May 1952

PLATE TARGET

ROCKET

Gage 7-1/2" Class B
Maker Bath
No. 55G232A2 Group B-113A
Dimensions 131" X 190"
OBLIQUITY 0°

PENETRATION Complete
Thickness at impact 7:50
No. of impact on plate 1
Dist. from nearest impact 0
Dist. from near edges 66" and 442"
Impact area 2" X 2-1/2"
Spall: Front 0 Back 0
Dish 0 Spur 1/8"
Cracks 0
Punching (thrown) (shattered)
Back Button (thrown) (shattered)
Bulge 0
Through opening 3/8" X 3/8"

HEAD: Cal. 2"75 Type Shaped Charge
Mark F-2016 Mod No. 437 Wt. 0.92#
Maker T2016
Lot No. T2016
Filler: Type Comp B Wt. 0.92#
Fuzes T2023 Lot 2-4 9120

Boosters 1
Wt. of head (as fired) 120°
MOTOR: Cal. 5" Mk. 2 Mod 3
Motor temp. 120° Wt. 86.50#
COMPLETE ROUND: Mark 0 Mod 0
Wt. (as fired) 0
Wt. (burned) 0

OTHER INFORMATION
ALN: RMDA-847-HA-45
" " " "
LAUNCHER 1050' Rocket Launcher

ROCKET PERFORMANCE

Flight Velocity, f/s: Mean Striking 2025 Residual 0
Fuze functioning On Target
Explosive action (High Order) (Low Order) (None)
Distance of burst behind plate 0
Condition of recovered round Head was in (EFFECTIVE) (INEFFECTIVE) condition.

REMARKS: 0

Photo No. NP9-4 2283

Signed F.M. Keady

F.M. Keady
ORD. ENG.

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IMPACT RECORD

U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIA

IMPACT NO. 39904

IMPACT DATE 5-7-52

NPG TEST NO. T-2222-1.24

OBJECT Functioning Test of T-2023 Fuzes for 2x75 Shaped Charges
Rocket Head T-2016 with two 570 HVAK Motors vs 7-1/2" CL B Plate.

Reference: NPG NOI ltr. NP/NOI/XI-1(2444) Ser 2741DP dated 2 May 1952

Reference: BUC ltr. NP/NOI/XI-1(2444) Ser 2741DP dated 2 May 1952

Task Assignment No. NPG-Re2b - 11-1-52 dated 2 May 1952

PLATE TARGET

Gage 7-1/2" Class B
Maker Beth.
No. 55G232 #2 Group B-113A
Dimensions 131" X 190"

OBLIQUITY 0°

PENETRATION 7"
Thickness at impact 7x50
No. of impact on plate 2
Dist. from nearest impact 6"
Dist. from near edges T68" and R48"
Impact area 2" X 2"
Spall: Front 0 Back 0
Dish 0 Spur 0
Cracks 0
Punching (thrown) (started)
Back Button (thrown) (started) 0
Bulge 1/16"
Through opening 0

ROCKET

HEAD: Cal. 2x75 Type Shaped Charge
Mark Mod No. Wt.
Maker
Lot No. T2016
Filler: Type comp. B Wt. 0.92#
Fuzes T2023 Lot PA-E9120

Boosters 1
Wt. of head (as fired)

MOTOR: Cal. 5" Mk. 2 Mod 3
Motor temp. 120° Wt. 86.90#

COMPLETE ROUND: Mark Mod
Wt. (as fired)
Wt. (burned)

OTHER INFORMATION
ALN: RMDA-847-HA-45
" - " - " - "
LAUNCHER 1050' Rocket Launcher

ROCKET PERFORMANCE

Flight Velocity, f/s: Mean Striking 2039 Residual
Fuze functioning On Target
Explosive action (High Order) (Low Order) (None)
Distance of burst behind plate
Condition of recovered round
Head was in (EFFECTIVE) (INEFFECTIVE) condition.

REMARKS:

Photo No. NP3-4283

Signed F. W. Kendorf

C. W. Kendorf

ORD. ENG.

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Impact Record #2

IMPACT RECORD

U. S. NAVAL PROVING GROUND
DAHLOREN, VIRGINIA

IMPACT NO. 39905

IMPACT DATE 5-7-52

NPG TEST NO. T-2222-1.24

OBJECT Functioning Test of T2023 Fuzes for 2275 Shaped Charge
Rocket Head T2016 with two 570 HVAR Motors vs 7-1/2" Cl. B Plate.
Reference: NPG NOL ltr. Report No 1014 dated 2 May 1952
Reference: BUMED ltr. NP/NOL/XI-1(2444) Ser 2741 DF: C dated 2 May 1952
Task Assignment No. NPG-Re2b - II-1-52 dated

PLATE TARGET

Gage 7-1/2" Class B
Maker Beth.
No. 55G232A2 Group B-113A
Dimensions 131" X 190"

OBLIQUITY 0°

PENETRATION Complete
Thickness at impact 7.50
No. of impact on plate 3
Dist. from nearest impact 13"
Dist. from near edges 56" and 54"
Impact area 2-1/4" X 2-1/4"
Spall: Front 0 Back 0
Dish 0 Spur 1/8"
Cracks 0
Punching (thrown) (started)
Back Button (thrown) (started)
Bulge 0
Through opening 3/8" X 3/8"

ROCKET

HEAD: Cal. 2275 Type Shaped Charge
Mark Mod No. 420 Wt.
Maker
Lot No. T2016
Filler: Type Comp. B Wt. 0.92#
Fuzes T2023 Lot PA-E 9120

Boosters 1
Wt. of head (as fired)

MOTOR: Cal. 5" Mk. 2 Mod 3
Motor temp. 120° Wt. 87.65#

COMPLETE ROUND: Mark Mod
Wt. (as fired)
Wt. (burned)

OTHER INFORMATION
AIN: RMDA-847-HA-45
" - " - " - "
LAUNCHER 1050' Rocket Launcher

ROCKET PERFORMANCE

Flight Velocity, f/s: Mean 2053 Residual
Fuze functioning On Target
Explosive action (High Order) (Low Order) (None)
Distance of burst behind plate
Condition of recovered round
Head was in (EFFECTIVE) (INEFFECTIVE) condition.

REMARKS:

Photo No. NP-4 2283

Signed F. W. Keadorf

F. W. Keadorf

JRD.ENG.

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IMPACT RECORD #3

IMPACT RECORD

U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIA

IMPACT NO. 39906

IMPACT DATE 5-7-52

NPG TEST NO. T-2222-1.24

OBJECT Functioning Test of T2023 Fuzes for 2"75 Shaped Charge
Rocket Head T2016 with two 5"0 HVAR Motors vs 7-1/2" CL B Plate.
Reference: NPG NOI Tr. T-2016 3/10/10/14 dated 2 May 1952
Reference: BMDA Tr. NPG NOI/XI-1(2444) Ser 27410F:GDE dated 2 May 1952
Task Assignment No. NPG-Re26 - 11-1-52 dated 2 May 1952

PLATE TARGET

Gage 7-1/2" Class B
Maker Beth.
No. 55G232A2 Group B-113A
Dimensions 131" X 190"

OBLIQUITY 0°

PENETRATION Complete
Thickness at impact 7"50
No. of impact on plate 4
Dist. from nearest impact 6"
Dist. from near edges 51" and 60"
Impact area 2-1/2" X 2-1/2"
Spall: Front 0 Back 0
Dish 0 Spur 1/4"
Cracks 0
Punching (thrown) (started)
Back Button (thrown) (started)
Bulge 0
Through opening 3/8" X 3/8"

ROCKET

HEAD: Cal. 2"75 Type Shaped Charge
Mark Mod No. 121 Wt. 0.92#
Maker T2016
Lot No. T2016
Filler: Type Comp. E Wt. 0.92#
Fuzes T2023 Lot PA-8 9121

Boosters 1
Wt. of head (as fired) 0.92#

MOTOR: Cal. 5" Mk. 2 Mod 3
Motor temp. 120° Wt. 90.00#

COMPLETE ROUND: Mark Mod
Wt. (as fired) 0.92#
Wt. (burned) 0.92#

OTHER INFORMATION
AIN: BMDA-642-HA-45
" - 375 - "
LAUNCHER 1050' Rocket Launcher

ROCKET PERFORMANCE

Mean
Flight Velocity, f/s: Striking 2132 Residual 0
Fuse functioning On Target
Explosive action (High Order) (Low Order) (None)
Distance of burst behind plate 0
Condition of recovered round Head was in (EFFECTIVE) (INEFFECTIVE) condition.

REMARKS:

Photo No. NP9-4 2283

Signed F. W. Keador

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ORD. ENG.

IMPACT RECORD

U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIAIMPACT NO. 39907IMPACT DATE 5-7-52NPG TEST NO. T-2222-1.24

OBJECT Functioning Test of T2023 Fuzes for 2"75 Shaped Charge
Rocket Head T2016 with two 5"0 HVAR Motors vs 7-1/2" C.I.B Plate.
 Reference: NPG NO. 1014 dated 2 May 1952
 Reference: ~~BUORD~~ NP/NGL/XI-1(2444) Ser 2741 DF:G dated 2 May 1952
 Task Assignment No. NPG - Re26 - 11-1-52 dated 2 May 1952

PLATE TARGET

Gage 7-1/2" Class B
 Maker Bath
 No. 553232A2 Group B-113A
 Dimensions 131" X 190"

OBLIQUITY 0°PENETRATION CompleteThickness at impact 7-1/2"No. of impact on plate 5Dist. from nearest impact 2"Dist. from near edges 48" and 460"Impact area 2" X 2"Spall: Front 0 Back 0Dish 0 Spur 1/4"Cracks 0

Punching (thrown) (started)

Back Button (thrown) (started)

Bulge 0Through opening 3/8" X 3/8"

ROCKET

HEAD: Cal. 2"75 Type Shaped ChargeMark Mod No. 321 Wt. 321

Maker

Lot No. T2016Filler: Type Comp. B Wt. 0.924Fuzes T2023 Lot PA-E 9121Boosters 1

Wt. of head (as fired)

MOTOR: Cal. 5" Mk. 2 Mod 3Motor temp. 120° Wt. 87.55#COMPLETE ROUND: Mark Mod

Wt. (as fired)

Wt. (burned)

OTHER INFORMATION

ALN: RMDA-375-HA-45" - 3 77-HA-45LAUNCHER 1050' Rocket Launcher

ROCKET PERFORMANCE

Flight Velocity, f/s: Mean Striking 2043 ResidualFuze functioning On TargetExplosive action (High Order) (Low Order) (None)

Distance of burst behind plate

Condition of recovered round

Head was in (EFFECTIVE) (INEFFECTIVE) condition.

REMARKS:

Photo No. NP 7-4 3283Signed F. W. KasdorfF. W. Kasdorf

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Impact Record #5

IMPACT RECORD

U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIAIMPACT NO. 39908IMPACT DATE 5-7-52NPG TEST NO. T-2222-1.24OBJECT Functioning Test of T2023 Fuzes for 2"75 Shaped ChargeRocket Head T2016 with two 5"0 HVAR Motors vs 7-1/2" C.I.B Plate.Reference: NPG ltr. Rept 310/1014 datedReference: Book ltr. NPG/NOL/XI-1(2444) Ser 2741 DF:GD dated 2 May 1952Task Assignment No. NPG - Re2b - 11-1-52 datedPLATE TARGETGage 7-1/2" Class B
Maker Beth.
No. 55G232A2 Group B-113A
Dimensions 131" X 190"OBLIQUITY 0°PENETRATION Complete
Thickness at impact 7-1/2"
No. of impact on plate 6
Dist. from nearest impact 2-1/2"
Dist. from near edges T63-374 "R44"
Impact area 1-1/4" X 1-1/4"
Spall: Front 2" X 2" Back 0
Dish 0 Spur 1/4"
Cracks 0
Punching (thrown) (started)
Back Button (thrown) (started) 0
Bulge 0
Through opening 3/8" X 3/8"ROCKETHEAD: Cal. 2"75 Type Shaped Charge
Mark Mod No. 77 Wt.
Maker
Lot No. T2016
Filler: Type Comp. B Wt. 0.92#
Fuzes T2023 Lot PA-E 9121Boosters 1
Wt. of head (as fired) MOTOR: Cal. 5" Mk. 2 Mod 3
Motor temp. 120° Wt. 87.60#COMPLETE ROUND: Mark Mod
Wt. (as fired)
Wt. (burned) OTHER INFORMATION
ALN: RMDA-275-HA-45
" -377-" -45
LAUNCHER 1050' Rocket Launcher

ROCKET PERFORMANCE

Flight Mean Velocity, f/s: Striking 2043 Residual
Fuze functioning On Target
Explosive action (High Order) (Low Order) (None)
Distance of burst behind plate
Condition of recovered round
Head was in (EFFECTIVE) (INEFFECTIVE) condition.REMARKS: Photo No. NP9-49283Signed T. W. KasdorfT. W. KasdorfCONFIDENTIAL
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Impact Record #6

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IMPACT RECORD

U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIAIMPACT NO. 39909IMPACT DATE 5-8-52NPG TEST NO. T-2224-1.5OBJECT Functioning test of T2023 fuzes for 2"75 Shaped
Charge R. Head T2016Reference: NPG NO. 7/6 1014 dated
Reference: BuOrd Ltr NP/NOL/XI-1 (2444) Ser 2741 DF: GDB dated 2 May 1952
Task Assignment No. NPG-Resub - 11-1-52 dated

PLATE TARGET

Gage 7"50 Class B
Maker Bethlehem
No. 55G232A2 Group B-113A
Dimensions 131" x 190"OBLIQUITY 0°PENETRATION CompleteThickness at impact 2"50No. of impact on plate 7Dist. from nearest impact 15"Dist. from near edges 38" and 169"Impact area 2" x 2-1/2"Spall: Front 0 Back 0Dish 0 Spur 1/4"Cracks 0

Punching (thrown) (started)

Back Button (thrown) (started)

Bulge 0Through opening 3/8" x 3/8"

ROCKET

HEAD: Cal. 2"75 Type Shaped ChargeMark - Mod - No. 41 Wt. -Maker Picatinny Arsenal T2016

Lot No.

Filler: Type Comp. B Wt. .92#Fuzes T2023Lot PA-E-9122Boosters 1Wt. of head (as fired) -MOTOR: Cal. 5" Mk. 2 Mod 3Motor temp. 90° Wt. 86.65#COMPLETE ROUND: Mark - Mod -

Wt. (as fired)

Wt. (burned)

OTHER INFORMATION

ALN: RMMA-375-RA-45" -642- "LAUNCHER 1050' Rocket Launcher

ROCKET PERFORMANCE

Flight Velocity, f/s: Mean Striking 1952 Residual -Fuze functioning ON TARGETExplosive action (High Order) (Low Order) (None)

Distance of burst behind plate

Condition of recovered round

Head was in (EFFECTIVE) (INEFFECTIVE) condition.

REMARKS:

Photo No. - Signed F. W. Kasdorf

F. W. KASDORF, Jr.

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Impact Record #7

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IMPACT RECORD

U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIAIMPACT NO. 39910IMPACT DATE 5-8-52NPG TEST NO. T2224-1.5OBJECT Functioning test of T2023 fuzes for 2:75 Shaped
Charge Rocket Head T2016Reference: NPG NOL lrr. 201-245-10/1014 datedReference: BuOrd ltr. NPG/NOL/X1-1 (2444) Ser 2741 DF:GDB dated 2 May 1952Task Assignment No. NPG-Re2b - 11-1-52 datedPLATE TARGETGage 7:50 Class B
Maker Bethlehem
No. 55G232A2 Group B113A
Dimensions 131" x 190"OBLIQUITY 0°PENETRATION Complete
Thickness at impact 7:50
No. of impact on plate 8
Dist. from nearest impact 12"
Dist. from near edges T53" and L72"
Impact area 2" x 2"
Spall: Front 0 Back 0
Dish 0 Spur 1/4"
Cracks 0
Punching (thrown) (started)
Back Button (thrown) (started)
Bulge 0
Through opening 3/8" x 3/8"ROCKETHEAD: Cal. 2:75 Type Shaped-Charge
Mark Mod No. 39 Wt. 88.95#
Maker Picatinny Arsenal, T2016
Lot No. PA-E-9122
Filler: Type Comp. B Wt. .92#
Fuzes T2023
Boosters 1
Wt. of head (as fired) -MOTOR: Cal. 5" Mk. 2 Mod 3
Motor temp. 90° Wt. 88.95#COMPLETE ROUND: Mark Mod
Wt. (as fired)
Wt. (burned)OTHER INFORMATION
ALN: RMDA-375-HA-45
-642-
LAUNCHER 1050" Rocket Launcher

ROCKET PERFORMANCE

Flight Striking Velocity, f/s: mean 2017 Residual ---
Fuze functioning On Target
Explosive action (High Order) (Low Order) (None)
Distance of burst behind plate
Condition of recovered round
Head was in (EFFECTIVE) (INEFFECTIVE) condition.

REMARKS:

Photo No. ---Signed F. W. Kasdorf
F. W. KASDORF, Jr
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Impact Record #8

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IMPACT RECORD

U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIAIMPACT NO. 39911IMPACT DATE 5-8-52NPG TEST NO. T-2224-1.5OBJECT Functioning test of T2023 fuzes for 2"75 Shaped
Charge Rocket Head T2016Reference: NPG NOL ltr. 22 May 1952 datedReference: BMOR ltr. NP/NOL/X1-1 (2444) Ser 2741 DF: GDE dated 2 May 1952Task Assignment No. NPG-Re2b - 11-1-52 dated

PLATE TARGET

ROCKET

Cage 7"50 Class B
Maker Bethlehem
No. 55G232A2 Group B-113A
Dimensions 131" x 190"HEAD: Cal. 2"75 Type Shaped-Charge
Mark Mod No. 22 Wt. 86.80#
Maker Picatinny Arsenal, T2016
Lot No. PA-E-9122
Filler: Type Comp B Wt. .92#
Fuzes T2023
Boosters 1
Wt. of head (as fired)OBLIQUITY 0°PENETRATION Complete
Thickness at impact 7"50
No. of impact on plate 9
Dist. from nearest impact 12"
Dist. from near edges 59" and 166"
Impact area 2" x 2"
Spall: Front 0 Back 0
Dish 0 Spur 1/4"
Cracks 0
Punching (thrown) (started)
Back Button (thrown) (started)
Bulge 0
Through opening 3/8" x 3/8"MOTOR: Cal. 5" Mk. 2 Mod 3
Motor temp. 90° Wt. 86.80#COMPLETE ROUND: Mark Mod
Wt. (as fired)
Wt. (burned)OTHER INFORMATION
ALN: RMDA: -377-HA-45
" -762- "
LAUNCHER 1050' Rocket Launcher

ROCKET PERFORMANCE

Flight Lean Velocity, f/s: Striking 2034 Residual ---
Fuze functioning On Target
Explosive action (High Order) (Low Order) (None)
Distance of burst behind plate ---
Condition of recovered round ---
Head was in (EFFECTIVE) (INEFFECTIVE) condition.REMARKS: ---

---Photo No. ---Signed F. W. KASDORF
F. W. KASDORF, 1h
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Impact Record #9

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IMPACT RECORD

U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIAIMPACT NO. 39912IMPACT DATE 5-8-52

NPG TEST NOT-2224-1.5

OBJECT Functioning test of T2023 fuzes for 2"75 Shaped
Charge Rocket Head T2016Reference: NPG NOL ltr. 2500-1-5-70 101-4 datedReference: ~~Back~~ ltr. NP/NOL/XI-1 (2444) Ser 2741 DF:GD dated 2 May 1952Task Assignment No. NPG-Re2b - 11-1-52 datedPLATE TARGETGage 7"50 Class B
Maker Bethlehem
No. 55G232A2 Group B-II3A
Dimensions 131" x 190"OBLIQUITY 0°PENETRATION CompleteThickness at impact 7"50No. of impact on plate 10Dist. from nearest impact 5"Dist. from near edges T57" and L74"Impact area 2-1/2" x 2-1/2"Spall: Front 0 Back 0Dish 0 Spur 1/8"Cracks 0

Punching (thrown) (started)

Back Button (thrown) (started)

Bulge 0Through opening 3/8" x 3/8"ROCKETHEAD: Cal. 2"75 Type Shaped-ChargeMark Mod No. Wt.Maker Picatinny Arsenal, T2016

Lot No.

Filler: Type Comp. B Wt. .92#Fuzes T2023Lot PA-E-9122Boosters 1

Wt. of head (as fired)

MOTOR: Cal. 5" Mk. 2 Mod 3Motor temp. 90° Wt. 89.25#COMPLETE ROUND: Mark Mod

Wt. (as fired)

Wt. (burned)

OTHER INFORMATION

ALN: RMDA-642-HA-45-377-HA-45LAUNCHER 1050" Rocket Launcher

ROCKET PERFORMANCE

Flight Velocity, f/s: Mean Striking 1964 ResidualFuze functioning 2nd TargetExplosive action (High Order) (Low Order) (None)

Distance of burst behind plate

Condition of recovered round

Head was in (EFFECTIVE) (INEFFECTIVE) condition.

REMARKS:

Photo No. _____

Signed F. W. KASDORFOrd. Enr.CONFIDENTIAL
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U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIAIMPACT NO. 39913IMPACT DATE 5-8-52NPG TEST NO. T-2224-1.5OBJECT Functioning test of T2023 fuzes for 2"75 Shaped
Charge Rocket Head T2016Reference: NPG 1st 10/1/52 dated
Reference: 1st NCL/X1-1 (2444) Ser 2741 DF:GD dated 2 May 1952
Task Assignment No. NPG-R-21 - 11-1-52 dated

PLATE TARGET

ROCKET

Gage 7"50 Class B
Maker Bethlehem
No. 55G232A2 Group B-113A
Dimensions 131" x 190"OBLIQUITY 0°PENETRATION 7-1/4"Thickness at impact 7"50No. of impact on plate 11Dist. from nearest impact 2"Dist. from near edges T55" and 175"Impact area 2-1/4" x 2-1/2"Spall: Front 0 Back 0Dish 0 Spur 0Cracks 0

Punching (thrown) (started)

Back Button (thrown) (checked)

Bulge 1/2"Through opening 0HEAD: Cal. 2"75 Type Shaped-ChargeMark Mod No. 44 Wt.Maker Picatinny Arsenal, T2016

Lot No.

Filler: Type Comp B Wt. .92#Fuzes T2023Lot PA-E-9122Boosters 1

Wt. of head (as fired)

MOTOR: Cal. 5" Mk. 2 Mod 3Motor temp. 90° Wt. 89.95#COMPLETE ROUND: Mark Mod

Wt. (as fired)

Wt. (burned)

OTHER INFORMATION

ALN: PMDA-642-MA-45" - 647 - "LAUNCHER 1050" Rocket Launcher

ROCKET PERFORMANCE

Flight Velocity, f/s: Striking Mean 1976 ResidualFuze functioning 100%Explosive action (High Order) (Low Order) (None)

Distance of burst behind plate

Condition of recovered round

Head was in (EFFECTIVE) (INEFFECTIVE) condition.

REMARKS:

Photo No.

Signed F. W. KASCHOFF

F. W. KASCHOFF, Jr.

Ord. Eng.

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IMPACT RECORD

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U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIA

IMPACT NO. 39914

IMPACT DATE 5-9-52

NPG TEST NO T-2222-1.24

OBJECT Functioning test of T2023 fuzes for 2775 Rocket Heads
T2016

Reference: NPG Ltr. 7/1/52 dated
Reference: NPG Ltr. NOL/XI-1 (2444) Ser 2741 DF: GDE dated 2 May 1952
Task Assignment No. NPG-Res 11-1-52 dated

PLATE TARGET

Gage 7750 Class B
Maker Bethlehem
No. 55G232A2 Group B-113A
Dimensions 131" x 190"

OBLIQUITY 0°

PENETRATION Complete
Thickness at impact 7750
No. of impact on plate 12
Dist. from nearest impact 27"
Dist. from near edges 56" and 182"
Impact area 2-1/4" x 2-1/2"
Spall: Front 0 Back 0
Dish 0 Spur 1/8"
Cracks 0
Punching (thrown) (started)
Back Button (thrown) (started)
Bulge 0
Through opening 3/8" x 3/8"

ROCKET

HEAD: Cal. 2775 Type Shaped-Chg.
Mark T2016 Mod - No. 546 Wt.
Maker Picatinny Arsenal
Lot No.
Filler: Type Comp B Wt. .92#
Fuzes T2023, Lot PAE-9122

Boosters 1
Wt. of head (as fired) -

MOTOR: Cal. 5" Mk. 2 Mod 3
Motor temp. 70° Wt. 88.20#

COMPLETE ROUND: Mark Mod
Wt. (as fired)
Wt. (burned)

OTHER INFORMATION
ALN: RLDA-642-HA-45
" -375- "
LAUNCHER 1050" Rocket Launcher

ROCKET PERFORMANCE

Flight Velocity, f/s: Mean 1901 Residual
Fuze functioning In Test
Explosive action (High Order) (Low Order) (None)
Distance of burst behind plate
Condition of recovered round
Head was in (EFFECTIVE) (INEFFECTIVE) condition.

REMARKS:

Photo No.

Signed F. W. KASDORF, Jr.
Ord. Eng.

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U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIA

IMPACT NO. 39915

IMPACT DATE 5-9-52

NPG TEST NO. T-2222-1.24

OBJECT Functioning test of T2023 fuzes for 2"75 Shaped Charge
Rocket Heads T2016

Reference: NPG NOL Tr. 7.1.1.5 10/14 dated
Reference: Bureau ltn NP/NOL/X1-1 (2444) Ser 2741 DF:GD dated 2 May 1952
Task Assignment No. NPG-Re2b - 11-1-52 dated

PLATE TARGET

Gage 7"50 Class B
Maker Bethlehem
No. 55G232A2 Group B-113A
Dimensions 131" x 190"

OBLIQUITY 0°

PENETRATION Complete
Thickness at impact 7"50
No. of impact on plate 13
Dist. from nearest impact 5"
Dist. from near edges T58 and L77"
Impact area 2-1/2" x 2-1/2"
Spall: Front 0 Back 0
Dish 0 Spur 1/4"
Cracks 0
Punching (thrown) (started)
Back Button (thrown) (started)
Bulge 0
Through opening 3/8" x 3/8"

ROCKET

HEAD: Cal. 2"75 Type Shaped-Chg.
Mark T2016 Mod No. 1 Wt.
Maker Picatinny Arsenal
Lot No.
Filler: Type Comp E Wt. .92#
Fuzes T2023, Lot PAE-9122

Boosters 1
Wt. of head (as fired)

MOTOR: Cal. 5" Mk. 2 Mod 3
Motor temp. 70° Wt. 88.55#

COMPLETE ROUND: Mark Mod
Wt. (as fired)
Wt. (burned)

OTHER INFORMATION
ALN: RMDA-673-HA-45
W - W - W

LAUNCHER 1050' Rocket Launcher

ROCKET PERFORMANCE

Flight Velocity, f/s: Mean Striking 1864 Residual
Fuze functioning On Target
Explosive action (High Order) (Low Order) (None)
Distance of burst behind plate
Condition of recovered round
Head was in (EFFECTIVE) (INEFFECTIVE) condition.

REMARKS:

Photo No.

Signed F. W. Kasdorf
F. W. KASDORF, Jr.
Ord. Eng.

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U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIA

IMPACT NO. 39916

IMPACT DATE 5-9-52

NPG TEST NO. T-2222-1.24

OBJECT Functioning test of T2023 fuzes for 2"75 Shaped
Charge Rocket Heads T2016Reference: NPG NO. 11-1-52 datedReference: ~~BUORD~~ ltr. NP/NOI/XI-1(2444)Ser2/41DF:GD dated 2 May 1952Task Assignment No. NPG-Re2b - 11-1-52 dated

PLATE TARGET

Gage 2"50 Class B
Maker Bethlehem
No. 55G232A2 Group B-113A
Dimensions 131" x 190"OBLIQUITY 0°PENETRATION Complete
Thickness at impact 2"50
No. of impact on plate 14
Dist. from nearest impact 10"
Dist. from near edges 53" and 192"
Impact area 2-1/4" x 2-1/4"
Spall: Front 0 Back 0
Dish 0 Spur 1/4"
Cracks 0
Punching (thrown) (started)
Back Button (thrown) (started)
Bulge 0
Through opening 3/8" x 3/8"

ROCKET

HEAD: Cal. 2"75 Type Shaped-Chg.
Mark T2016 Mod No. 2 Wt.
Maker Picatinny Arsenal
Lot No.
Filler: Type Comp B Wt. .92#
Fuzes T2023 Lot PAE-9122Boosters I
Wt. of head (as fired) MOTOR: Cal. 5" Mk. 2 Mod 3
Motor temp. 70° Wt. 87.85#COMPLETE ROUND: Mark Mod
Wt. (as fired)
Wt. (burned)

OTHER INFORMATION

ALN: RLDA-377-HA-45
-642-LAUNCHER 1050' Rocket Launcher

ROCKET PERFORMANCE

Flight Mean Velocity, f/s: Striking - Residual
Fuze functioning On Target
Explosive action (High Order) (Low Order) (None)
Distance of burst behind plate
Condition of recovered round
Head was in (EFFECTIVE) (INEFFECTIVE) condition.REMARKS: Photo No. Signed F. W. Kasdorf
F. W. KASDORF, Jr.
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IMPACT RECORD

U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIAIMPACT NO. 39917IMPACT DATE 5-9-52NPG TEST NO. T-2222-1.24OBJECT Functioning test of T2023 fuzes for 2"75 Shaped Charge
Rocket Heads T2016Reference: NPG NO. 11-1-52 datedReference: ~~Barock~~ ltr NP/NOL/XI-1 (2444) Ser 274 IDF: GDR dated 2 May 1952Task Assignment No. NPG-Rezb - 11-1-52 dated

PLATE TARGET

Gage 7"50 Class B
Maker Bethlehem
No. 55G232A2 Group B-113A
Dimensions 131" x 190"OBLIQUITY 0°PENETRATION CompleteThickness at impact 7"50
No. of impact on plate 15
Dist. from nearest impact 4"
Dist. from near edges 161" and 183"
Impact area 2" x 2-1/4"
Spall: Front 0 Back 0
Dish 0 Spur 1/4"
Cracks 0
Punching (thrown) (started)
Back Button (thrown) (skipped)
Bulge 0
Through opening 3/8" x 3/8"

ROCKET

HEAD: Cal. 2"75 Type Shaped-Chg.Mark T2016 Mod No. Wt. Maker Picatinny ArsenalLot No. Filler: Type Comp B Wt. .92#Fuzes T2023, Lot PAE-9122Boosters 1Wt. of head (as fired) MOTOR: Cal. 5" Mk. 2 Mod 3Motor temp. 70° Wt. 88.50#COMPLETE ROUND: Mark Mod Wt. (as fired) Wt. (burned)

OTHER INFORMATION

ALN: RMDA-377-HA-45" -642- "LAUNCHER 1050' Rocket Launcher

ROCKET PERFORMANCE

Flight Velocity, f/s: Striking Mean Residual Fuze functioning On TargetExplosive action (High Order) (Low Order) (None)Distance of burst behind plate Condition of recovered round

Head was in (EFFECTIVE) (INEFFECTIVE) condition.

REMARKS: Photo No. Signed F. W. Kasdorp
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U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIA

IMPACT NO. 39918

IMPACT DATE 5-9-52

NPG TEST NO. T-2222-1.24

OBJECT Functioning test of T2023 fuzes for 2"75 Shaped Charge
Rocket Heads T2016

Reference: NPG NOL tr. Report 1014 dated

Reference: Bureau tr. NP/NCI/XI-1(2444) Ser 2741 DF:GDB dated 2 May 1952

Task Assignment No. NPG-Re2b - 11-1-52 dated

PLATE TARGET

Gage 7"50 Class B
Maker Bethlehem
No. 55G232A2 Group B-113A
Dimensions 131" x 190"

OBLIQUITY 0°

PENETRATION Complete
Thickness at impact 7"50
No. of impact on plate 16
Dist. from nearest impact 4"
Dist. from near edges 59" and 197"
Impact area 2" x 2-1/4"
Spall: Front 0 Back 0
Dish 0 Spur 1/4"
Cracks 0
Punching (thrown) (started)
Back Button (thrown) (started)
Bulge 0
Through opening 3/8" x 3/8"

ROCKET

HEAD: Cal. 2"75 Type Shaped-Chg.
Mark T2016 Mod No. - Wt.
Maker Picatinny Arsenal
Lot No.
Filler: Type Comp B Wt. .92#
Fuzes T2023, Lot PAE-9122

Boosters 1
Wt. of head (as fired)

MOTOR: Cal. 5" Mk. 2 Mod 3
Motor temp. 70° Wt. 87.95#

COMPLETE ROUND: Mark Mod
Wt. (as fired)
Wt. (burned)

OTHER INFORMATION
ALN: RMDA-377-HA-45
" -847- "

LAUNCHER 1050" Rocket Launcher

ROCKET PERFORMANCE

Flight Velocity, f/s: Mean Striking 1908 Residual
Fuze functioning ON TARGET
Explosive action (High Order) (Low Order) (None)
Distance of burst behind plate
Condition of recovered round
Head was in (EFFECTIVE) (INEFFECTIVE) condition.

REMARKS:

Photo No.

Signed F. W. Kasdore
F. W. KASDORE, Jr.
Ord. Eng.

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U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIA

IMPACT NO. 39921

IMPACT DATE 5-12-52

NPG TEST NO. T-2222-1.24

OBJECT Functioning Test of T2023 Fuzes for 2"75 Shaped Charge
Rocket Head T2016 with two 570 HVAR Rocket Motors vs 7-1/2" C.I.B. Plate.
Reference: NPG NO. 11-1-52 dated 2 May 1952
Reference: NP/NOL/XI(2444) Ser 2741 DF:GDB dated 2 May 1952
Task Assignment No. NPG-Re2b - 11-1-52 dated 2 May 1952

PLATE TARGET

Gage 7-1/2" Class B
Maker Bath
No. 55G23242 Group B-1134
Dimensions 131" X 190"

OBLIQUITY 0°

PENETRATION Complete
Thickness at impact 7"50
No. of impact on plate 17
Dist. from nearest impact 1"
Dist. from near edges 60" and 98"
Impact area 2" X 2"
Spall: Front 0 Back 0
Dish 0 Spur 1/4"
Cracks 0
Punching (thrown) (started)
Back Button (thrown) (started)
Bulge 0
Through opening 3/8" X 3/8"

ROCKET

HEAD: Cal. 2"75 Type Shaped Charge
Mark 2016 Mod No. 147 Wt. 88.35#
Maker Picatinny Arsenal
Lot No. 1050
Filler: Type Comp. B Wt. 88.35#
Fuzes T2023 Lot 2A-E-9121

Boosters 1
Wt. of head (as fired) 88.35#

MOTOR: Cal. 5" Mk. 2 Mod 3
Motor temp. 90° Wt. 88.35#

COMPLETE ROUND: Mark 1050 Mod 3
Wt. (as fired) 88.35#
Wt. (burned) 88.35#

OTHER INFORMATION
AIN: RMDA-8.7-HA-1.5
377- " "
LAUNCHER 1050" Rocket Launcher

ROCKET PERFORMANCE

Mean
Flight Velocity, f/s: striking 1840 Residual 1840
Fuse functioning ON TARGET
Explosive action (High Order) (Low Order) (None)
Distance of burst behind plate 1840
Condition of recovered round Head was in (EFFECTIVE) (INEFFECTIVE) condition.

REMARKS: Head was in (EFFECTIVE) (INEFFECTIVE) condition.

Photo No. 1050 Signed F. W. Keadorf

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Impact Record #17

F. W. Keadorf
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IMPACT RECORD

U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIAIMPACT NO. 39922IMPACT DATE 5-12-52NPG TEST NO. T-2222-1.24

OBJECT Functioning Test of T202 Fuze for 2775 Shaped Charge
Rocket Head T2016 with two 570 HVAR Rocket Motors vs 7-1/2" CL 5 Plate.
 Reference: NPGNOLtr. Report No 1014 dated _____
 Reference: BUCM ltr NPGNOL/AL (2444) Ser 2741 DF:GDE dated 2 May 1952
 Task Assignment No. NPG-Re2b - 11-1-52 dated _____

PLATE TARGETROCKET

Gage 7-1/2" Class B
 Maker Beth.
 No. 55232A2 Group B-113A
 Dimensions 131" X 190"

HEAD: Cal. 2775 Type Shaped Charge
 Mark T2016 Mod No. 2 Wt. _____
 Maker Picatinny Arsenal
 Lot No. _____
 Filler: Type Comp. B/T.
 Fuze T202, Lot PA-E-9121

OBLIQUITY 0°

PENETRATION Complete
 Thickness at impact 7"50
 No. of impact on plate 18
 Dist. from nearest impact 12"
 Dist. from near edges 44" and 83"
 Impact area 2" X 2-1/4"
 Spall: Front 0 Back 0
 Dish 0 Spur 1/4"
 Cracks 0
 Punching (thrown) (started) _____
 Back Button (thrown) (started) _____
 Bulge 0
 Through opening 3/8" X 3/8"

Boosters _____
 Wt. of head (as fired) _____

MOTOR: Cal. 5" Mk. 2 Mod 3
 Motor temp. 90° Wt. 87.15#

COMPLETE ROUND: Mark _____ Mod _____
 Wt. (as fired) _____
 Wt. (burned) _____

OTHER INFORMATION _____
 ALN: RMDA-847-HA-45
"- 377-" "
 LAUNCHER 1050' Rocket Launcher

ROCKET PERFORMANCE

Flight _____ Velocity, f/s: Mean Striking 1857 Residual _____
 Fuze functioning On Target
 Explosive action (High Order) (Low Order) (None) _____
 Distance of burst behind plate _____
 Condition of recovered round _____
Head was in (EFFECTIVE) (INEFFECTIVE) condition.

REMARKS: _____

Photo No. _____

Signed F. W. KasdorfF. W. Kasdorf

ORD. ENG.

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Impact Record #18

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IMPACT RECORD

U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIA

IMPACT NO. 39923

IMPACT DATE 5-12-52

NPG TEST NO. T-2222-1.24

OBJECT Functioning Test of T2023 Fuzes for 2775 Shaped Charge
Rocket Head T2016 with two 570 HVAR Rocket Motors vs 7-1/2" Cl.B Plate.
Reference: NPG ltr. Request 11-1-52 dated
Reference: ENR 11-1-52 NP/NOL/XI(2444)Ser2741DP:GDS dated 2 May 1952
Task Assignment No. NPG-Re2b - 11-1-52 dated

PLATE TARGET

Gage 7-1/2" Class B
Maker Bath
No. 55G232A2 Group B-113A
Dimensions 131" X 190"
OBLIQUITY 0°

PENETRATION Complete
Thickness at impact 2"50
No. of impact on plate 10
Dist. from nearest impact 6"
Dist. from near edges 157" and 186"
Impact area 21 7/8" X 2-1/4"
Spall: Front 0 Back 0
Dish 0 Spur 1/4"
Cracks 0
Punching (thrown) (started)
Back Button (thrown) (started)
Bulge 0
Through opening 3/8" X 3/8"

ROCKET

HEAD: Cal. 2775 Type Shaped Charge
Mark T2016 Mod No. 3 & 2 Wt.
Maker Picatinny Arsenal
Lot No.
Filler: Type Wt.
Fuzes T2023, Lot PA-E-9121

Boosters 1
Wt. of head (as fired)

MOTOR: Cal. 5" Mk. 2 Mod 3
Motor temp. 90° Wt. 87.85#

COMPLETE ROUND: Mark Mod
Wt. (as fired)
Wt. (burned)

OTHER INFORMATION
ALN: 847-HA-45
" - 377 - " - "
LAUNCHER 1050' Rocket Launcher

ROCKET PERFORMANCE

Flight Velocity, f/s: Striking 1957 Residual
Fuse functioning ON TARGET
Explosive action (High Order) (Low Order) (None)
Distance of burst behind plate
Condition of recovered round
Head was in (EFFECTIVE) (INEFFECTIVE) condition.

REMARKS:

Photo No. Signed F. W. Keady
G. W. Keady

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IMPACT RECORD

U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIAIMPACT NO. 39924IMPACT DATE 5-12-52NPG TEST NO. T-2222-1,24

OBJECT Functioning Test of T2023 Fuzes for 2"75 Shaped Charge
Rocket Head T2016 with two 570 GVAR Rocket Motors vs 7-1/2" C.I.B. Plate
 Reference: NPG ltr. 7-1-52 1014 dated _____
 Reference: Boards ltr NPG/NCI/XI(2444) Ser 2741 DF:GDB dated 2 May 1952
 Task Assignment No. NPG-Re2b - 11-1-52 dated _____

PLATE TARGET

Gage 7-1/2" Class B
 Maker Beth.
 No. 55G232A2 Group B-113A
 Dimensions 131" X 190"

OBLIQUITY 0°

PENETRATION Complete
 Thickness at impact 7-1/2"
 No. of impact on plate 20
 Dist. from nearest impact 5"
 Dist. from near edges 55" and 195"
 Impact area 2" X 2-1/2"
 Spall: Front 0 Back 0
 Dish 0 Spur 1/4"
 Cracks 0
 Punching (thrown) (started) _____
 Back Button (thrown) (started) _____
 Bulge 0
 Through opening 3/8" X 3/8"

ROCKET

HEAD: Cal. 2"75 Type Shaped Charge
 Mark T2016 Mod No. 435 Wt. _____
 Maker Picatinny Arsenal
 Lot No. _____
 Filler: Type Comp. B Wt. _____
 Fuzes T2023 Lot FA-E-9121

Boosters I
 Wt. of head (as fired) _____

MOTOR: Cal. 5" Mk. 2 Mod 3
 Motor temp. 90° Wt. 87.20#

COMPLETE ROUND: Mark _____ Mod _____
 Wt. (as fired) _____
 Wt. (burned) _____

OTHER INFORMATION
AIN: RMDA-377-MA-45
" - " - " - "

LAUNCHER 1050' Rocket Launcher

ROCKET PERFORMANCE

Flight Mean
 Velocity, f/s: Striking 1929 Residual _____
 Fuse functioning On Target
 Explosive action (High Order) (Low Order) (None)
 Distance of burst behind plate _____
 Condition of recovered round _____
 Head was in (EFFECTIVE) (INEFFECTIVE) condition.

REMARKS: _____

Photo No. _____

Signed F.W. Kasdorf

F.W. Kasdorf

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IMPACT RECORD

U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIAIMPACT NO. 39925IMPACT DATE 5-12-52NPG TEST NO. 2222-1.24

OBJECT Functionality Test of T2023 Fuzes for 2 1/2" Shaped Charge
Rocket Head T201c with two M20 JUVAR Rocket Motors vs 7-1/2" C.I.B. Plate.
 Reference: NPG litr. 7/10/14 dated
 Reference: Encl 1tr NP/NOL/XI (2444) Ser 2741 DE:GDB dated 2 May 1952
 Task Assignment No. NPG-Re2b - 11-1-52 dated

PLATE TARGET

Gage 7-1/2" Class
 Maker Beth.
 No. 55232A2 Group 6-1134
 Dimensions 131" x 190"

OBLIQUITY

PENETRATION Complete
 Thickness at impact 7 1/2"
 No. of impact on plate 21
 Dist. from nearest impact 5"
 Dist. from near edges 58" and 1102"
 Impact area 2" x 2-1/4"
 Spall: Front 0 Back 0
 Dish 0 Spur 1/4"
 Cracks 0
 Punching (thrown) (started)
 Back Button (thrown) (started)
 Bulge 0
 Through opening 3/8" x 3/8"

ROCKET

HEAD: Cal. 2 1/2" Type Shaped Charge
 Mark T201c Mod No. Wt.
 Maker Picatinny Arsenal
 Lot No.
 Filler: Type Comp. B Wt.
 Fuzes T2023 Lot PA-E-9121

Boosters 1
 Wt. of head (as fired)

MOTOR: Cal. 5" Mk. 2 Mod 3
 Motor temp. 90° Wt. 87.85#

COMPLETE ROUND: Mark Mod
 Wt. (as fired)
 Wt. (burned)

OTHER INFORMATION
ALN: RMDA-377-MA-45
" -673-" -"
 LAUNCHER 1050' Rocket Launcher

ROCKET PERFORMANCE

Flight Velocity, f/s: Mean 1800 Residual
 Fuse functioning 2x Target
 Explosive action (High Order) (Low Order) (None)
 Distance of burst behind plate
 Condition of recovered round
Head was in (EFFECTIVE) (INEFFECTIVE) condition.

REMARKS:

Photo No.

Signed E. W. Kasdorf
E. W. Kasdorf
 ORN. ENG.

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IMPACT RECORD

U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIAIMPACT NO. 39926IMPACT DATE 5-13-52NPG TEST NO T-2222-1-24

OBJECT Functioning Test of T2023 Fuzes for 2275 Shaped Charge
Rocket Head T2016 with two 5"0 HVAR Rocket Motors vs 7-1/2" Cl B Plate
 Reference: NPG NOI Tr. 7/0.1014 dated
 Reference: BNR Tr NP/NOI/X1 (2444) Ser 2741 DF: GDB dated 2 May 1952
 Task Assignment No. NPG-Re2b - 11-1-52 dated

PLATE TARGET

Cal. 7-1/2" Class B
 Maker Beth.
 No. 55G232A2 Group B-113A
 Dimensions 131" X 190"

OBLIQUITY 0°

PENETRATION Complete
 Thickness at impact 7-1/2"
 No. of impact on plate 22
 Dist. from nearest impact 20"
 Dist. from near edges 102" and 160"
 Impact area 2" X 2"
 Spall: Front 0 Back 0
 Dish 0 Spur 1/4"
 Cracks 0
 Punching (thrown) (started)
 Back Button (thrown) (started)
 Bulge 0
 Through opening 1/4" X 1/4"

ROCKET

HEAD: Cal. 2275 Type Shaped Charge
 Mark T2016 Mod No. 146 Wt.
 Maker Picatinny Arsenal
 Lot No.
 Filler: Type Comp. B Wt.
 Fuzes T2023 Lot PA-E-9121

Boosters
 Wt. of head (as fired)

MOTOR: Cal. 5" Mk. 2 Mod 3
 Motor temp. 70° Wt. 85.85#

COMPLETE ROUND: Mark Mod
 Wt. (as fired)
 Wt. (burned)

OTHER INFORMATION
ALN: RMDA-847- HA-45

LAUNCHER 1050' Rocket Launcher

ROCKET PERFORMANCE

Mean
 Flight Velocity, f/s: Striking 1551 Residual
 Fuze functioning On Target
 Explosive action (High Order) (Low Order) (None)
 Distance of burst behind plate
 Condition of recovered round
Head was in (EFFECTIVE) (INEFFECTIVE) condition.

REMARKS: Fuze FUNCTIONING TIME 56 secPhoto No. Signed F. W. Keadorf

F. W. Keadorf
 ORD. ENG.

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IMPACT RECORD

U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIAIMPACT NO. 39927IMPACT DATE 5-13-52NPG TEST NO. T-2222-1.24

OBJECT Functioning Test of T2023 Fuzes for 2775 Shaped Charge
Rocket Head T2016 with two 570 HVAR Rocket Motors vs 7-1/2" C.I.B. Plate.
 Reference: NPG NOL ltr. Report No. 1014 dated _____
 Reference: ~~DoDA~~ ltr NPG NOL/XI (2444) Ser 2741 DE:GDE dated 2 May 1952
 Task Assignment No. NEG-Re2b - 11-1-52 dated _____

PLATE TARGET

Gage 7-1/2" Class B
 Maker Beth.
 No. 55G232A2 Group B-113
 Dimensions 131" X 190"

OBLIQUITY 0°

PENETRATION

Thickness at impact _____
 No. of impact on plate _____
 Dist. from nearest impact _____
 Dist. from near edges _____ and _____
 Impact area _____
 Spall: Front _____ Back _____
 Dish _____ Spur _____
 Cracks _____
 Punching (thrown) (started) 2
 Back Button (thrown) (started) _____
 Bulge _____
 Through opening _____

ROCKET

HEAD: Cal. 2775 Type Shaped Charge
 Mark T2016 Mod _____ No. 340 Wt. _____
 Maker Pontinny Arsenal
 Lot No. _____
 Filler: Type Comp. B Wt. _____
 Fuzes T2023 Lot PA-E-9121

Boosters _____
 Wt. of head (as fired) _____

MOTOR: Cal. 5" Mk. 2 Mod 3
 Motor temp. 70° Wt. 88.20#

COMPLETE ROUND: Mark _____ Mod _____
 Wt. (as fired) _____
 Wt. (burned) _____

OTHER INFORMATION

ALM: 2MDA-817-HA-15LAUNCHER 1050' Rocket Launcher

ROCKET PERFORMANCE

Flight _____ Velocity, f/s: Mean 1511 Residual _____
 Fuze functioning None
 Explosive action (High Order) (Low Order) (None) None Deflagrated
 Distance of burst behind plate _____
 Condition of recovered round _____
Head was in (EFFECTIVE) (INEFFECTIVE) condition.

REMARKS: Fuze End Head Deflagrated on Impact.

Photo No. _____

Signed F.W. Keador

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Impact Record #23

F.W. Keador
 ORB ENG.

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IMPACT RECORD

U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIAIMPACT NO. 39928IMPACT DATE 5-13-52NPG TEST NO T-2222-1.24OBJECT Functioning Test of T2023 Fuzes for 2 1/2" Shaped Charge
Rocket Head T2016 with two 540 HVAH Rocket Motors vs 7-1/2" C.I.B. Plate.Reference: NPG litr. Report No. 1014 datedReference: litr. NPG/NOL/X1(2444) Ser 2741 DF:GDB dated 2 May 1952Task Assignment No. NPG-Re2b - 11-1-52 dated

PLATE TARGET

Gage 7-1/2" Class B
Maker Bath.
No. 55G232A2 Group B-113A
Dimensions 131" X 190"OBLIQUITY 0°PENETRATION Complete
Thickness at impact 7 1/2"
No. of impact on plate 24
Dist. from nearest impact 12"
Dist. from near edges 150" and 160"
Impact area 2" X 2 1/4"
Spall Front 0 Back 0
Dish 0 Spur 1/4"
Cracks 0
Punching (thrown) (started)
Back Button (thrown) (started)
Bulge 0
Through opening 1/4" X 1/4"

ROCKET

HEAD: Cal. 2 1/2" Type Shaped Charge
Mark T2016 Mod No. 238 Wt.
Maker Fitch City Arsenal
Lot No.
Filler: Type Comp. B Wt.
Fuzes T2023 Lot PA-E-9120Boosters
Wt. of head (as fired) MOTOR: Cal. 5" Mk. 2 Mod 3
Motor temp. 70° Wt. 88.00#COMPLETE ROUND: Mark Mod
Wt. (as fired)
Wt. (burned) OTHER INFORMATION
ALN: RMDA-673-HA-45LAUNCHER 1050' Rocket LauncherROCKET PERFORMANCE
MeanFlight Velocity, f/s: Striking 1545 Residual
Fuze functioning On Target
Explosive action (High Order) (Low Order) (None)
Distance of burst behind plate
Condition of recovered round
Head was in (EFFECTIVE) (INEFFECTIVE) condition.REMARKS: TUBE FUNCTIONING TIME 65 1/2 SEC.Photo No. Signed E. W. KnadoffE. W. Knadoff

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IMPACT RECORD

U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIA

IMPACT NO. 39929

IMPACT DATE 5-13-52

NPG TEST NO. 2222-1.24

OBJECT Functioning Test of T2023 Fuzes for 2775 Shaped Charge
Rocket Head T2016 with two 570 HVAR Rocket Motors vs 7-1/2" C.I.B. Plate.
Reference: NPG NO. 1134 dated 2 May 1952
Reference: NP/NOL/XI(2444)Ser2741DE:GDB dated 2 May 1952
Task Assignment No. NPG-Re2b - 11-1-52 dated 2 May 1952

PLATE TARGET

Gage 7-1/2" Class B
Maker Bath
No. 55G23212 Group B-113A
Dimensions 131" X 190"

OBLIQUITY 0°

PENETRATION Complete
Thickness at impact 7.50
No. of impact on plate 25
Dist. from nearest impact 2-1/2"
Dist. from near edges 1/4" and 1/2"
Impact area 2" X 2-1/2"
Spall: Front 0 Back 0
Dish 0 Spur 1/4"
Cracks 0
Punching (thrown) (started)
Back Button (thrown) (started)
Bulge 0
Through opening 1/4" X 1/4"

ROCKET

HEAD: Cal. 2775 Type Shaped Charge
Mark T2016 Mod No. Wt.
Maker Picatinny Arsenal
Lot No.
Filler: Type Comp. B.Wt.
Fuzes T2023 Lot PA-E- 9120
Boosters
Wt. of head (as fired)

MOTOR: Cal. 5" Mk. 2 Mod 3
Motor temp. 70° Wt. 87.00#
COMPLETE ROUND: Mark Mod
Wt. (as fired)
Wt. (burned)

OTHER INFORMATION
ALN: RMDA-377-HA-45
LAUNCHER 1050 Rocket Launcher

ROCKET PERFORMANCE

Flight Velocity, f/s: Standard 1542 Residual
Fuze functioning ON TARGET
Explosive action (High Order) (Low Order) (None)
Distance of burst behind plate
Condition of recovered round
Head was in (EFFECTIVE) (INEFFECTIVE) condition.

REMARKS: Fuze functioning time 69 sec

Photo No.

Signed F.W. Kasdorf
F.W. Kasdorf

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IMPACT RECORD

U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIA

IMPACT NO. 39931

IMPACT DATE 5-14-52

NPG TEST NO. T-2222-1.24

OBJECT Functioning test of T-2023 fuzes for 2"75 Shaped
Charge Rocket Heads T-2016

Reference: NPG ltr. dated

Reference: ~~Book~~ ltr. NCL/X1 (2444) Ser 2741 DF:GDE dated 2 May 1952

Task Assignment No. NPG-Re2b - 11-1-52 dated

PLATE TARGET

Gage 7"50 Class B
Maker Bethlehem
No. 55G232A2 Group B-113A
Dimensions 131" x 190"

OBLIQUITY 0°

PENETRATION Complete

Thickness at impact 7"50

No. of impact on plate 26

Dist. from nearest impact 6"

Dist. from near edges T53" and L63"

Impact area 2" x 2-1/4"

Spall: Front 0 Back 0

Dish 0 Spur 1/4"

Cracks 0

Punching (thrown) (started)

Back Button (thrown) (started)

Bulge 0

Through opening 3/8" x 3/8"

ROCKET

HEAD: Cal. 2"75 Type Shaped-Chg.

Mark T2016 Mod No. 1234 Wt.

Maker Picatinny Arsenal

Lot No.

Filler: Type Comp B Wt. 92#

Fuzes T-2023, Lot PAE-9120

Boosters 1

Wt. of head (as fired)

MOTOR: Cal. 5" Mk. 2 Mod 3

Motor temp. 70° Wt. 87.10#

COMPLETE ROUND: Mark Mod

Wt. (as fired)

Wt. (burned)

OTHER INFORMATION

ALN: RMDA-673-HA-45

" -847- " "

LAUNCHER 1050' Rocket Launcher

ROCKET PERFORMANCE

Flight Velocity, f/s: ~~Stalling~~ ^{Lean} 1813 ResidualFuze functioning On Target

Explosive action (High Order) (Low Order) (None)

Distance of burst behind plate

Condition of recovered round

Head was in (EFFECTIVE) (INEFFECTIVE) condition.

REMARKS: Fuze functioning fine not takenMissed fuze functioning fine not taken

Photo No.

Signed F. W. Kasdorf
F. W. KASDORF 1h
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IMPACT RECORD

U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIA

IMPACT NO. 39932

IMPACT DATE 5-14-52

NPG TEST NO. T-2222-1.24

OBJECT Functioning test of T-2023 fuzes for 2775 Shaped
Charge Rocket Heads T-2016Reference: NPG ~~NO~~ ~~tr.~~ ~~70-101-4~~ dated
Reference: ~~NO~~ ~~tr.~~ ~~NP/NOL/XI(2444)~~ Ser 2741 DF: GDE dated 2 May 1952
Task Assignment No. NPG-Re2b - 11-1-52 dated

PLATE TARGET

Gage 7"50 Class B
Maker Bethlehem
No. 55G232A2 Group B-113A
Dimensions 131" x 190"

OBLIQUITY 0°

PENETRATION 7-1/4"
Thickness at impact 7"50
No. of impact on plate 27
Dist. from nearest impact 6"
Dist. from near edges 144" and 158"
Impact area 2" x 2"
Spall: Front 0 Back 0
Dish 0 Spur 0
Cracks 0
Punching (thrown) (started)
Back Button (thrown) (kicked)
Bulge 1/16"
Through opening 0

ROCKET

HEAD: Cal. 2775 Type Shaped-Chg.
Mark T2016 Mod No. 3 Wt.
Maker Picatinny Arsenal
Lot No.
Filler: Type Comp B Wt. .92#
Fuzes T-2023, Lot PAE-9120Boosters 1
Wt. of head (as fired)MOTOR: Cal. 5" Mk. 2 Mod 3
Motor temp. 70° Wt. 87.10#COMPLETE ROUND: Mark Mod
Wt. (as fired)
Wt. (burned)OTHER INFORMATION
ALN: RMDA-673-HA-45
" - " - "

LAUNCHER 1050' Rocket Launcher

ROCKET PERFORMANCE

Flight Velocity, f/s: Mean 1832 Residual
Fuze functioning ON TARGET
Explosive action (High Order) (Low Order) (None)
Distance of burst behind plate
Condition of recovered round

Head was in (EFFECTIVE) (INEFFECTIVE) condition.

REMARKS: ALL FUNCTIONING TYPE NOT FUSED
Fuze functioning fine & fuze was

Photo No.

Signed F. W. Kasdorf
F. W. KASDORF, Jr.
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U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIAIMPACT NO. 39933IMPACT DATE 5-14-52NPG TEST NO. T-2222-1.24OBJECT Functioning test of T-2023 fuzes for 2:75 Shaped
Charge Rocket Heads T-2016Reference: NPG NO. 11-1-52 dated 10/10/44
Reference: XXXXX ltr NP/NOL/XI(2444) Ser 2741 DF:GDB dated 2 May 1952
Task Assignment No. NPG-Re2b - 11-1-52 dated PLATE TARGETGage 7:50 Class B
Maker Bethlehem
No. 55G232A2 Group B-113A
Dimensions 131" x 190"OBLIQUITY 0°PENETRATION Complete
Thickness at impact 7:50
No. of impact on plate 28
Dist. from nearest impact 5"
Dist. from near edges 57" and 159"
Impact area 2-1/4" x 2-1/2"
Spall: Front 0 Back 0
Dish 0 Spur 1/4"
Cracks 0
Punching (thrown) (started)
Back Button (thrown) (~~started~~)
Bulge 0
Through opening 3/8" X 3/8"ROCKETHEAD: Cal. 2:75 Type Shaped-Chg.
Mark T2016 Mod No. 1 Wt.
Maker Picatinny Arsenal
Lot No.
Filler: Type Comp B Wt. .92#
Fuzes T-2023, Lot PAE-9120Boosters 1
Wt. of head (as fired) MOTOR: Cal. 5" Mk. 2 Mod 3
Motor temp. 70° Wt. 87.80#COMPLETE ROUND: Mark Mod
Wt. (as fired)
Wt. (burned) OTHER INFORMATION
ALN: RM DA-673-HA-45
" " "LAUNCHER 1050' Rocket Launcher

ROCKET PERFORMANCE

Flight Velocity, f/s: Mean Striking 1808 Residual
Fuze functioning ON TARGET
Explosive action (High Order) (Low Order) (None)
Distance of burst behind plate
Condition of recovered round
Head was in (EFFECTIVE) (INEFFECTIVE) condition.REMARKS: Fuze functioning time not takenPhoto No. Signed F. W. Kasdorf
F. W. KASDORF Jr.
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U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIAIMPACT NO. 39934IMPACT DATE 5-14-52NPG TEST NO. T-2222-1.24OBJECT Functioning test of T-2023 fuzes for 2"75 Shaped
Charge Rocket Heads T-2016Reference: NPG itr. 11-1-52 dated 11-1-52Reference: NOL itr. WP/NOL/X1(2444) Ser 2741 DF:GDB dated 2 May 1952Task Assignment No. NPG-Re2b - 11-1-52 dated 11-1-52PLATE TARGETGage 7"50 Class B
Maker Bethlehem
No. 55G232A2 Group B-113A
Dimensions 131" x 190"OBLIQUITY 0°PENETRATION Complete
Thickness at impact 7"50
No. of impact on plate 29
Dist. from nearest impact 3"
Dist. from near edges 54" and 166"
Impact area 2" x 2-1/2"
Spall: Front 0 Back 0
Dish 0 Spur 1/4"
Cracks 0
Punching (thrown) (started)
Back Button (thrown) (started)
Bulge 0
Through opening 3/8" x 3/8"ROCKETHEAD: Cal. 2"75 Type Shaped Chg.
Mark T2016 Mod No. 2 Wt. 3.5
Maker Picatinny Arsenal
Lot No. 1050
Filler: Type Comp B Wt. .92#
Fuzes T-2023 Lot PAE-9120Boosters -
Wt. of head (as fired) -MOTOR: Cal. 5" Mk. 2 Mod 3
Motor temp. 70° Wt. 87.45#COMPLETE ROUND: Mark - Mod -
Wt. (as fired) -
Wt. (burned) -OTHER INFORMATION
ALN: RMDA-847-HA-45LAUNCHER 1050' Rocket Launcher

ROCKET PERFORMANCE

Flight On Target Velocity, f/s: Mean 1532 Residual -
Fuze functioning On Target
Explosive action (High Order) (Low Order) (None)
Distance of burst behind plate -
Condition of recovered round -
Head was in (EFFECTIVE) (INEFFECTIVE) condition.REMARKS: MISSILE FUZE FUNCTIONING TIME - 5.821 IN RECORDPhoto No. -Signed F. W. Kasdorf
F. W. KASDORE, Jr.
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IMPACT RECORD

U. S. NAVAL PROVING GROUND
DAHLGREN, VIRGINIA

IMPACT NO. 39935
IMPACT DATE 5-14-52
NPG TEST NO. T-2222-1.24

OBJECT Functioning test of T-2023 fuzes for 2"75 Shaped
Charge Rocket Heads T-2016

Reference: NPG NOL ltr. 7-24-52 10-10-54 dated 4
Reference: ~~Encls~~ 1 ltr NPG/NOL/XI(2444) Ser 2741 DF:GDB dated 2 May 1952
Task Assignment No. NPG-Re2b - 11-1-52 dated

PLATE TARGET

Gage 7"50 Class B
Maker Bethlehem
No. 55G232A2 Group B-113A
Dimensions 131" x 190"

OBLIQUITY 0°

PENETRATION Complete
Thickness at impact 7"50
No. of impact on plate 30
Dist. from nearest impact 5"
Dist. from near edges 58" and 170"
Impact area 2" x 2-1/4"
Spall: Front 0 Back 0
Dish 0 Spur 1/4"
Cracks 0
Punching (thrown) (started)
Back Button (thrown) (started)
Bulge 0
Through opening 3/8" x 3/8"

ROCKET

HEAD: Cal. 2"75 Type Shaped-Chg.
Mark T2016 Mod No. 44 Wt.
Maker Picatinny Arsenal
Lot No.
Filler: Type Comp B Wt.
Fuzes T-2023, PAE-9120
Boosters -
Wt. of head (as fired)

MOTOR: Cal. 5" Mk. 2 Mod 3
Motor temp. 70° Wt. 86.80#

COMPLETE ROUND: Mark Mod
Wt. (as fired)
Wt. (burned)

OTHER INFORMATION
ALN: RMDA-673-HA-45

LAUNCHER 1050' Rocket Launcher

ROCKET PERFORMANCE

Flight Velocity, f/s: Mean 1550 Residual
Fuze functioning OUT TARGET
Explosive action (High Order) (Low Order) (None)
Distance of burst behind plate
Condition of recovered round
Head was in (EFFECTIVE) (INEFFECTIVE) condition.

REMARKS: Fuze Functioning Time 57 sec.

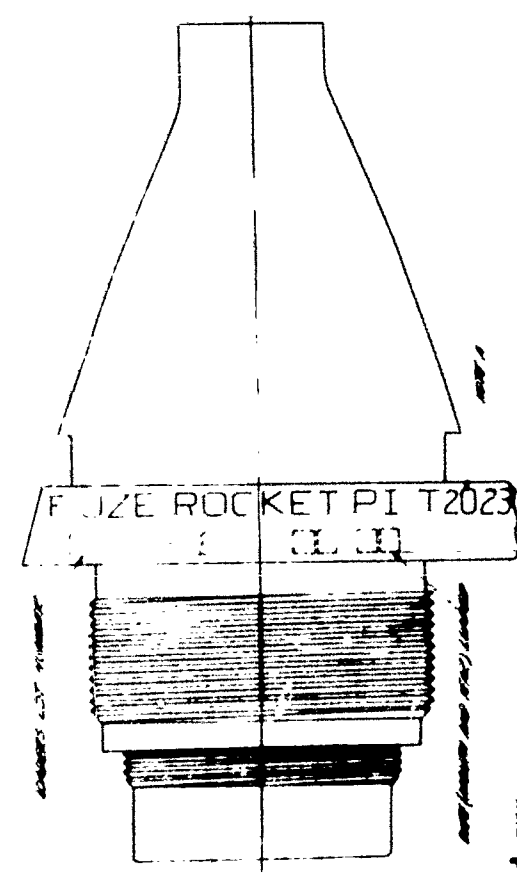
Photo No.

Signed F. W. Kasdorf
F. W. KASDORF, Jr
Ord. Eng.,

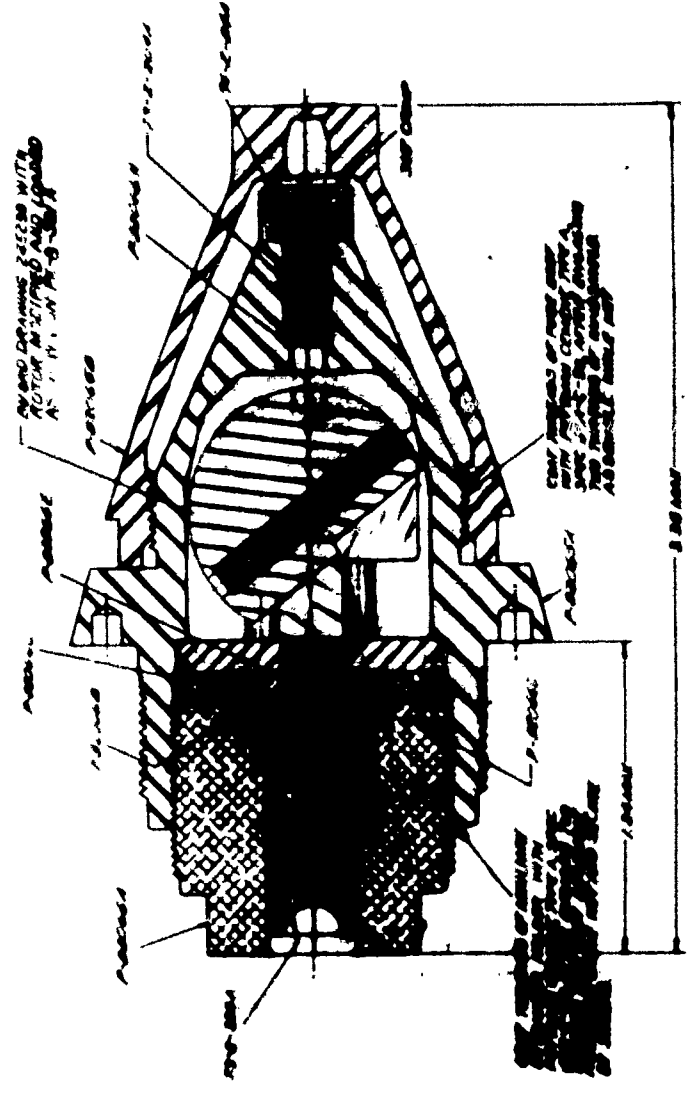
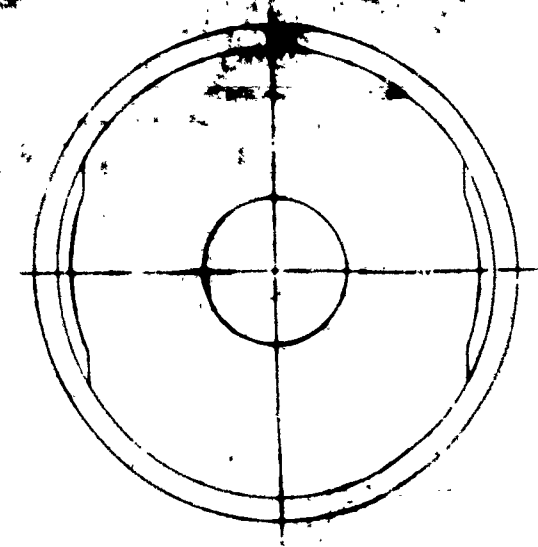
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CLASS & DIV	CLASS	DIV
1	2	3
4	5	6
7	8	9
10	11	12
13	14	15
16	17	18
19	20	21
22	23	24
25	26	27
28	29	30
31	32	33
34	35	36
37	38	39
40	41	42
43	44	45
46	47	48
49	50	51
52	53	54
55	56	57
58	59	60
61	62	63
64	65	66
67	68	69
70	71	72
73	74	75
76	77	78
79	80	81
82	83	84
85	86	87
88	89	90
91	92	93
94	95	96
97	98	99
100	101	102

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MARKING DIAGRAM



ASSEMBLY P-800000

HEAD, ASSEMBLY P-800000

CLASS & DIV	CLASS	DIV
1	2	3
4	5	6
7	8	9
10	11	12
13	14	15
16	17	18
19	20	21
22	23	24
25	26	27
28	29	30
31	32	33
34	35	36
37	38	39
40	41	42
43	44	45
46	47	48
49	50	51
52	53	54
55	56	57
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64	65	66
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79	80	81
82	83	84
85	86	87
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94	95	96
97	98	99
100	101	102

Figure 1

39907

39906

39905

FRONT

39904

39908

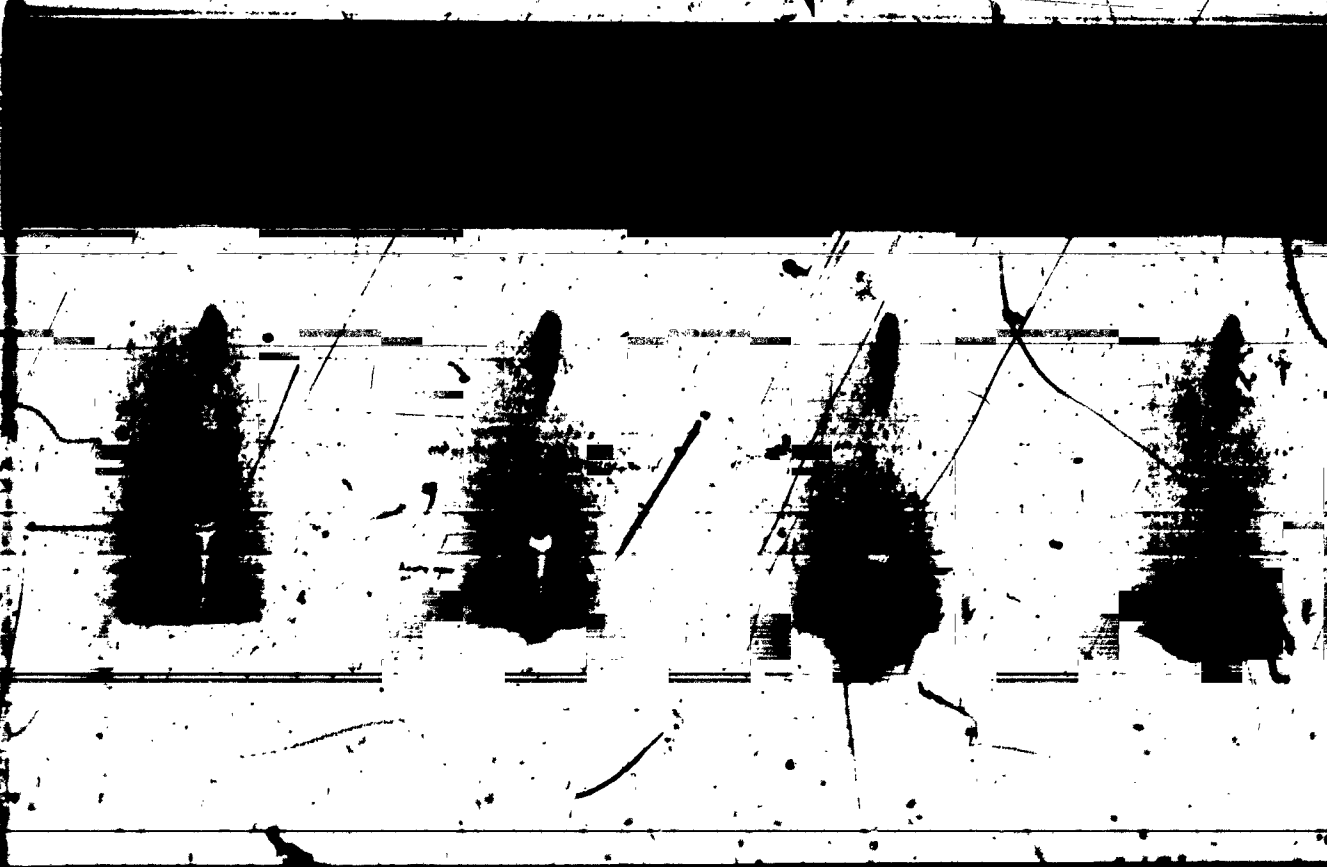
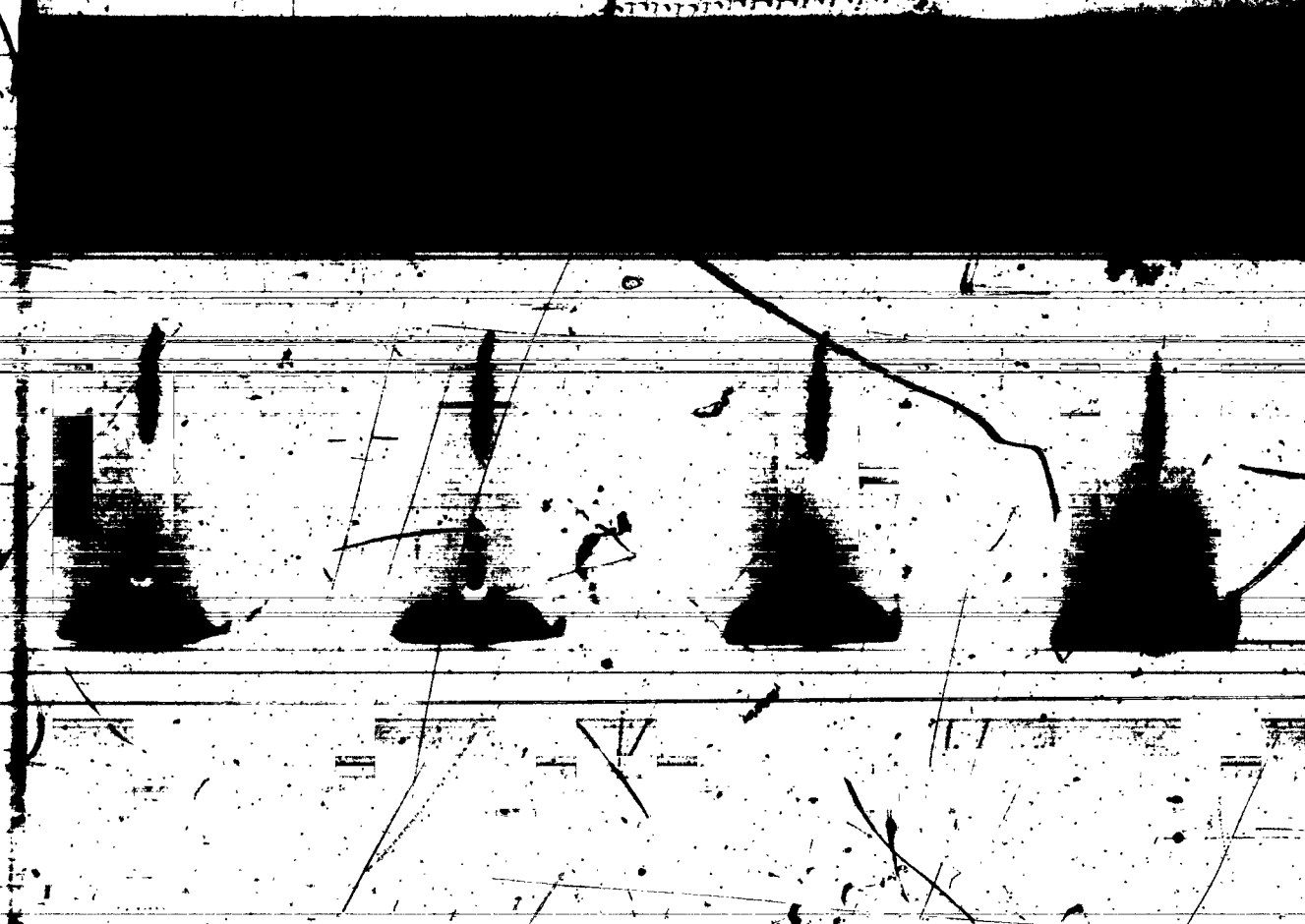
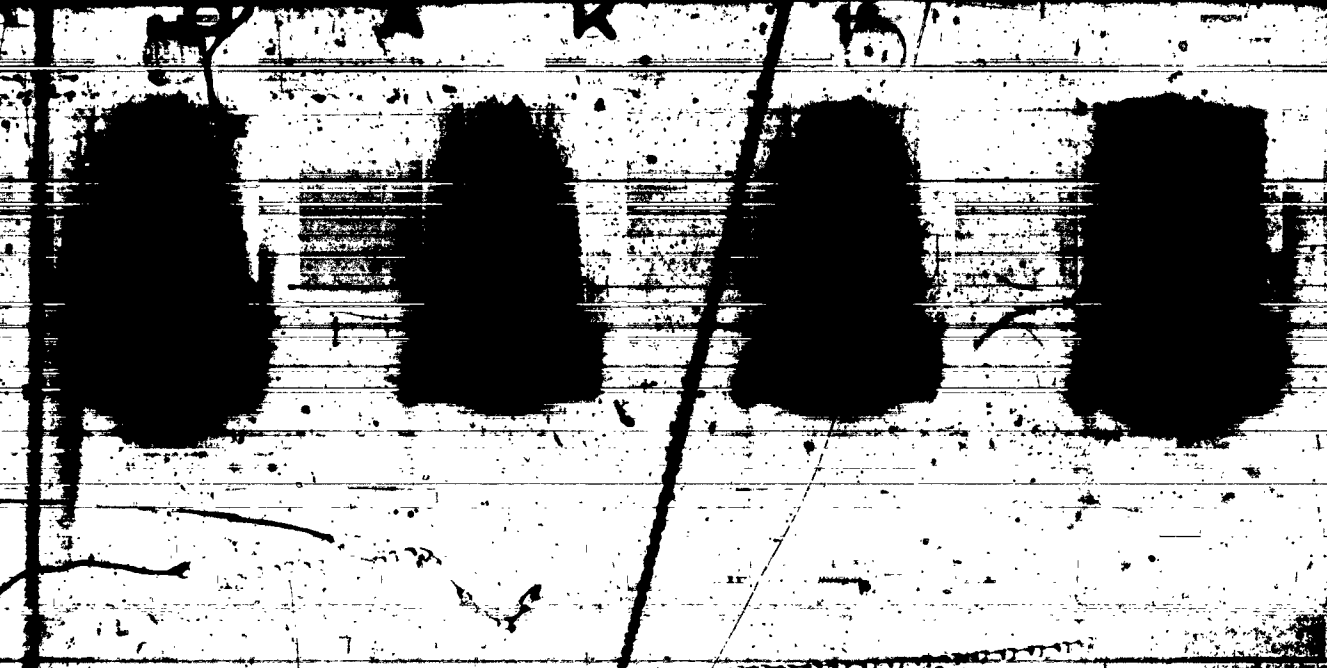
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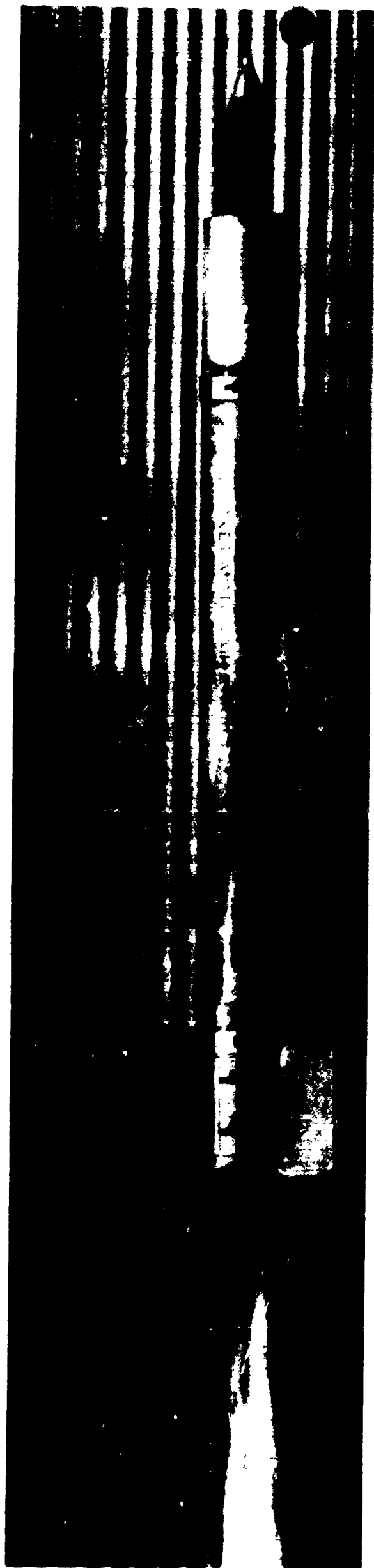
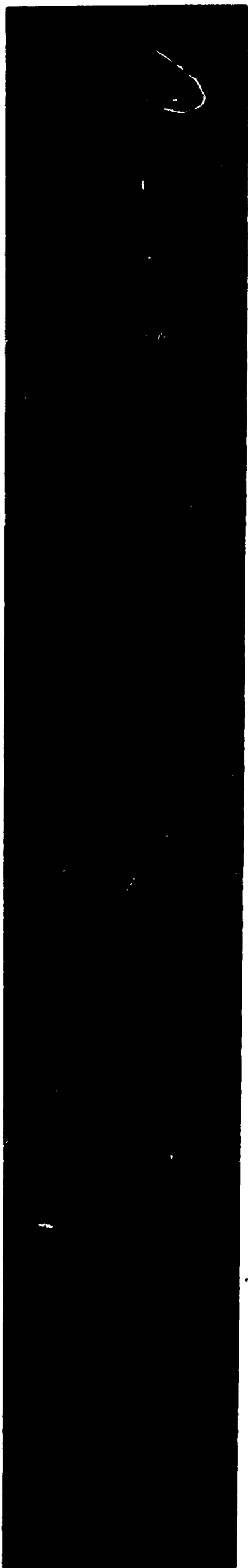
PLATE # 55G232A2

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